

Replacement Sheet



ABCC11 ~~~~~MTR KRTYWPNS GGLVNRGDI GDMVSGLIY KTYTLQDGPW SQQRNPEAP GRAAVPPWCK YDAALRTMTP FRPKRFPAP QPLDNAGLFS
 ABCC12 ~~~~~MVGEOPY LISDLQQR RRSFAE...R YDPSLKTWIP VRPCARL AP NPVDDAGLFS
 ABCC5 MKDIDIGKEY IIPSPGYRSV RERTSTSGTH RREDSKFR TRPLECQDAL ETARAEGLS LDASHMSQLR ILDEHPKCK YHGHISALKP IRTTSKHQ.. HPVDNAGLFS

ABCC11 YLTVSWLTP .MIQSLRSRL DENTIPPLSV HDASDKNVQR LHLWEEVS RRGIEKASVL LVMLRFQTR LIFDALLGIC FCIASVLGPI LIIPKILEYS EEOLGNVHVG
 ABCC12 FATFSWLTPV .MVKGYRQL TVDTLPPLST YDSSDTNAKR FRVLWDEEVA RVGPEKASLS HWVKFQTR VLMDIVANIL CIIMAAIGPV ILIHQILQOT ERTSGKVVVG
 ABCC5 CMTFSWLSSL ARVAHKKGE SMEDVWSLSK HESSDVNCR LERLWQELN EVGPDASLR RVWIFCRTR LILSIVCLMI TQLAGFSGPA FMVKHLEYT QATESNLQYS

ABCC11 VGLCFALFIS ECVKSLSFSS SWIINQRTAI RFRAAVSSFA FEKLIQFKSV IHITSCEAIS FFTGDVNYLF EGVCYGPVL ITCASLVIGS ISSYFIIGVT AFIAILCYLL
 ABCC12 IGLCIALFAT EFTKVFVWAL AWAINYRTAI RLKVALSTLV FENLVSEKTL THISVGEVLN ILSSDSYSLE EAALFCPLPA TIPILMVCA AYAFFILGPT ALIGISVYVI
 ABCC5 LLLVLGLLT ELVRSWLSL TWALNYRTGV RRGAILTMA FKKILKLNKI KEKSLGELIN ICSNDQGRMF EAAVGSLLA GGPVVAILG IYNVILGPT GLGSAVFI

ABCC11 VFPLAVFMR MAVKAQHTS EVSDORIRVT SEVLTCIKLI KMTWEKPPA KIMEDLRKE RKLEKGLV QSLTSITLPI IPTVATAVWV LIHTSLKLE TASMAFSMLA
 ABCC12 FIPVQFMFAK LMSAFRRSAI LVTDKRVQTM NEFLTCIRLI KMYAWEKSET NTIQDIRRE RKLEKAGFV QSGNSALAPI VSTIAIVLTL SCHILLRKL TAPVAFSVIA
 ABCC5 FYPAMFASR LAYFRKCV AATDERVQKM NEVLYIKFI KMYAVWAFS QSVQKIRREE RRILEKAGYF QGITVGVAPI VVVIASVVF SVHMTLGFDE TAAQAFVVT

ABCC11 SINLLRLSVF FVPIAVKGLT NKSAMVRFK KFFLOESPVF YVOTLQDPK ALVFEETLS WQ....QT CPGIV.... NGAL EB...ERNGH ASEGMRPRD
 ABCC12 MENVMKESIA ILPFSIKAMA EAVNSLRMK KILIDKSPS YITQPEDPT VILLANATLT WEHEASRST PKKLQ.... NQKR HICKKQSEA YSERSPPAKG
 ABCC5 VENSMTFALK VTPFSVKSLS EASVAVDREK SLFIMEEVHM IKNKPASPHI KIMKNATLA WDSSHSSIQN SPKLTPKMKK DKRASRCKE KVRQLQRTQH QAVLAEQGH

ABCC11 AL.....G PEEEGNS... ..LGPEL HKINLVWSKG MMLGVCNTG SGKSSLSAIS LEEMHLLGGS VGVQGSLAYV PQQAWIVSGN IRENTLMGGA YD.....KA
 ABCC12 AT.....G PEEQSDS... ..LKSVE HSISEFVRKG KILGICMVG SGKSSLSLAL LGQMQLQGV VAVNGTLAYV SQQAWIFGN VRENILFGKE YDHRQYQHTV
 ABCC5 LLLDSDERPS PEEEGKHII LGLRLQRTL HSIDELIQEG KLVGICGSVG SGKSLISAI LGQMTLEGS IASGTFAIV AQQAWILNAT LRDNILFGKE YDEERYNSVL

A

ABCC11 RTPGCACCLD MVPFTACLOI GERGLNLSSG QKORISLARA VYSDRQIYLL DDPLSAVDH VGKHFEECI KKTLRGKTV LVTHQLOYLE FCHQIILLEN GKICENGTHS
 ABCC12 RVCCLOQDLIS NLPYGLTETI GERGLNLSSG QKORISLARA VYSDRQIYLL DDPLSAVDH VGKHFEECI KKTLRGKTV LVTHQLOYLE SCDEVILLED GEICCKGTHK
 ABCC5 NSCCLRPDIA ILPSSDLTETI GERGANLSSG QKORISLARA LYSDRSYIYI DDPLSALDH VGNHIFNSAI RKHLKSKTVL FTHQLOQYIV DCDEVIFMKE GCITERGTHE

C

B

ABCC11 ELMQKKGKYA QLIQKM... ..H... ..KEAT SDMLQDTAKI AEPKVE SQ ALATSLEESL NGNAVPEHQL TOEEMEESG LSWRVYHHYI QAAGGYMVC
 ABCC12 ELMEEGRGYA KLIHNLRLGLO FKDPHLYNA AMVEAFKESP AEREEDAGIN VLAPCKEKE GKESETGSEF VDTKVPHEQL IQTESPOEQT VTWKTYHTYI KASGGYLLSI
 ABCC5 ELMNLNGDYA TIFNNL LG ETTPVEINSK KETSCSQKKS QDKPKTKSV KKEKAVKPEE G.....QL VQLEEKQGS VPWSYGVYI QAAGGYPIAFI

ABCC11 IIFFFVVLIV FLTIFSWWU SYWLEQSGST NSSRESNGTM ADLGNIDNP QLSFYQVYG LNALLCVGV VCSGIFTKV TRKASTALN KLENKVRCP MSFFDTIPIG
 ABCC12 FTVFLFLMI GSAAFNNWU GLWLDKGRM TCCPOGNRTM CEVGAVLADI QOHVQVWYT ASMVFMLVFG VTKGFVTKT TLMASSLHD TVFDKILKS MSFFDTPTG
 ABCC5 VIMALFMLNV GSTAFSTWWU SYWIKQCSGN TTVTRNETS VS.DSMKDNP HMQYIASIYA LSMAMVILK AIRGVVEVKG TLRASSRLHD ELFRILRSP MKFFDTPTG

ABCC11 RLNCFAGDL EQLDQLPIF SEQFLVLSIM VIAVLLIVSV LSPYHLMGA IIMVICFIY MMEKKAIGVF KRLNYSRSP LFSHILNSIQ GLSSIHVYCK TEDEISQFKR
 ABCC12 RLMNRFSDM DELDVRLPH AENFLOQFM VVFIILVIA VFPVLLVVA SLAVGFPIIL RIFHRGVQEL KVENVSRSP WFTHTSSMQ GIGIHAAYK KESCITY...
 ABCC5 RLMNRFSDM DEVDVRLPH AEMFIQNVIL VFECVGMIG VFPWFLVAV PLVILFSLH IVSRVLTREI KRLDNITQSP FLSHITSSIQ GLATHAYNK QOEFLHRYQE

ABCC11 LIDAQNNYLL LFLSSTRWMA LRLEIMTNV TLAVALFVAF GISSTPYSK VMANVILQI ASSFOATARI GLETEAQFTA VERILOYMK CVSEAPLHME GTSCPOGWPO
 ABCC12HLL YFNCALRWFA LRMDVLMNII TTFVALLVTE SFSSISTSSK GLSLSYIIQI SGLQVCVRT GTETQAKETS VELLREYIST CVPECTHPLK VGTCPKDWPS
 ABCC5 LLDONQAPFF LETCAMRWLA VRLDLISIAL ITTCLMTIVL MHQIIPAYA GLAISYAVQI TGLFQFTVRL ASETAERTS VERINHYIKT LSLEAPARIK NKAPSDDWPO

ABCC11 HGEIIFODYH MKYRDNTPTV LHGINLTIRG HEVVGIVGRT GSGKSSLGMA LFLRLEPMAG RILIDGVQIC SIGLEDLRK LSVIPQDPVL LSGTIRFNDL PDRHTDQOI
 ABCC12 CGEITFRDYQ MRYRDNTPLV LDSLMLNIQS QOTVGVGRT GSGKSSLGMA LFLRLEPMAG TIFIDEVDIC ILSLEDLRK LTVIPQDPVL FVGTVRYNLD PFESHTDEML
 ABCC5 EGEVTEENAE MRYRENPLV LKKVSFTIKP KEKIGIVGRT GSGKSSLGMA LFLRLEVSGG CIKIDGVRS DIGIADLRK LSVIPQDPVL FSGTVRSNLD PENQTEDQI

A

ABCC11 WDALERTFLT KAISKFPKKI HTDVVENGON FSVGERQLLC TARAVLRNSK IILIDEATAS IDMETDTLIQ RTIREAFQGC TVLVIAGRVT TVLNCDHILV MGNKVVEFD
 ABCC12 WQVLERTFMR DTIMKLEPKL QAEVTENGON FSVGERQLLC VARALLRNSK IILIDEATAS WDSKTDTLVQ NTIKDAFKGC TVLTIARHN TVLNCDHILV MENGKVIKED
 ABCC5 WDALERTHMK ECTAQLPLKL ESEVMENGON FSVGERQLLC TARALLRHCK IILIDEATAA MDTEDTLIQ ETIREAFADC TMLTIARHN TVLGSDRIMV LAQGVVEFD

C

B

ABCC11 RPEVLRKPG SLFAALMATA TSSLR*~~~ SEQ ID NO:47
 ABCC12 KPEVLAEPD SAFAMLLAE VRL*~~~~~ SEQ ID NO:33
 ABCC5 TPSVLSNDS SREYAMFAA ENKVAVG* SEQ ID NO:48

FIG. 1



FIG. 1A



Replacement Sheet

ABCC11	ITFFVVLIV	FLTIFSTWML	SYWLEQSGST	NSSRESNGTM	ADLGNADNP	QLSFYQLVYG	INALLLICVG	VCSSGIFTKV	TRKASTALHN	KLFNKVERCP	MSFDDTIRIG
ABCC12	FTVLELLMI	GSAAFSNWML	GLWLDKGRM	TCGPOGNRTM	CEVGAVLADI	GQHYQWVYT	ASWFMVVFVG	VTKGFFVTKT	TLMASSSLHD	TVFDKILKSP	MSFDDTPTG
ABCC5	VIMALEMLNV	GSTAFSTWML	SYWIKQSGN	TTVTRGNETS	VS.DSMKDNP	HMOVYASIYA	LSMAVMILIK	ATRGWFEVKG	TLRASSRLHD	ELFERRILRSP	MKFDDTPTG
ABCC11	RLINCFAIDL	EQLDQLLPF	SEOFVLVLSM	VIAVELIVSV	LSPYILIMGA	IIMVICFTYV	MMEKKAIGVF	KRLNYSRSP	LFSHILNSIQ	GUSIIHVYCK	TEDEFISQFKR
ABCC12	RLMNRFSKDM	DELVDRLPFH	AENFLQOQFM	VVFILVILAA	VFPVAVLJWA	SIUAGFFIUL	RIEHRGVOEL	KKVENVSRSR	WETHITSSMO	GUGIIHAYGK	KESCITY...
ABCC5	RLMNRFSKDM	DEVDVRLPEQ	AEMFIQNVIL	VFEFCVGMIA	VFPWELVAVG	PEVILESVEH	IVSRVLIREL	KRLDNITQSR	FLSHITSSIQ	GUATIHAYNK	GQEFELHRYQE
ABCC11	LTDAQNNYLL	LELSSTRWMA	LRUEIMTNLV	TLAVALEVAF	GISSTRYSFK	VMAVNIIVLOL	ASSFOATARI	GLETEAQFTA	VERILOVMKM	CVSEAPLHME	GTSCPOGWPO
ABCC12	.....HLI	YFNCALRWFA	LRMDVLMNUL	TFVTAILVTL	SFSSISTSSK	GUSLSYIIQL	SGLLOQCVRT	GTETOAKFTS	VELLREYIST	CVPECTHPIK	VGTCEKDWPS
ABCC5	ILDNDQAPFF	LETCAWRWLA	VRDLISIAL	ITTTGIMIVL	MHQIIPRAYA	GLAISYAVOL	TGLFOFTVRL	ASETEARTS	VERINHYIKT	LSLEAPARIK	NKAPSPDWPO
ABCC11	HGEIIFQDYH	MKYRDNTPTV	UHGINTLIRG	HEVWGIVGRT	GSGKSSSLGMA	LFRIVEPMAG	RULIDGVDIC	SIGLEDERSK	LSVIPQDDPVL	LSGTIRENLD	PEDRHTDQOI
ABCC12	CGEITERDYQ	MRYRDNTPLV	LDNLNINIOS	GOTVGIVGRT	GSGKSSSLGMA	LFRIVEPASG	TIFIDEVDIC	ILSLEDLRTK	LTVIPQDDPVL	FVGTVRNLD	PESHTDEML
ABCC5	EGEVTFENAE	MRYRENPLV	TKKVSFTIKP	KEKTGIVGRT	GSGKSSSLGMA	LFRIVELSGG	CIKIDGVRIS	DIGLADLRSK	LSIIPQEPVL	FSGTVRSNLD	PENQYTEDQI
.....											
ABCC11	WDALERTELT	KATSKFPKKL	HTDWENGGN	FSVGEROLLC	VARALLRNSK	ILILIDEATAS	IDMETDILIO	RTIREAFQGC	TVLVIAGRVT	TVLNCDDHILV	MNGKQWEFD
ABCC12	WQVLERTFMR	DTIMKLEPKU	QAEVTENGEM	FSVGEROLLC	VARALLRNSK	ILILIDEATAS	MDSKTDILVQ	NTIKDAFKGC	TVLTIAGRHLN	TVLNCDDHILV	MNGKQVIEFD
ABCC5	WDALERTHMK	ECTIAQLPLKI	ESEVMENGDN	FSVGEROLLC	VARALLRNSK	ILILIDEATAA	MDTETDILIO	ETIREAFQGC	TMLTIAHRLH	TVLIGSDRIMV	LAQGVVEFD
ABCC11	RPEVIRKKPG	SLFAALMATA	TSSLR*~	SEQ ID NO:47	.....					
ABCC12	KPEVIAEKPD	SAFAMUAAE	VRL*~	SEQ ID NO:33	.....					
ABCC5	TPSVILSND	SREYAMFAAA	ENKVAVG*	SEQ ID NO:48	.....					

FIG. 1B